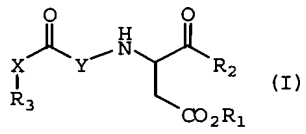
Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

Claims 1-83 (canceled).

Claim 84 (new). A method of treating or ameliorating cell death in lupus erythematosus, rheumatoid arthritis or type I diabetes, comprising administering to an animal in need of such treatment or ameliorating an effective amount of a compound having the Formula I:



(I)

or pharmaceutically acceptable salts or prodrugs thereof, wherein:

R_1 is an optionally substituted alkyl or hydrogen;

R_2 is hydrogen or optionally substituted alkyl;

R_3 is an alkyl, saturated carbocyclic, partially saturated carbocyclic, aryl, saturated heterocyclic, partially saturated heterocyclic or heteroaryl group, wherein said group is optionally substituted;

X is O, S, NR_4 or $(CR_4R_5)_n$, where R_4 and R_5 are, at each occurrence, independently selected from the group consisting of hydrogen, alkyl and cycloalkyl, and n is 0, 1, 2 or 3; or

X is NR_4, and R_3 and R_4 are taken together with the nitrogen atom to which they are attached to form a saturated heterocyclic, partially saturated heterocyclic or heteroaryl group, wherein said group is optionally substituted; or

X is CR_4R_5, and R_3 and R_4 are taken together with the carbon atom to which they are attached to form a saturated carbocyclic, partially saturated carbocyclic, aryl, saturated heterocyclic, partially saturated heterocyclic or oxygen-containing heteroaryl group, wherein said group is optionally substituted; and

Y is a residue of a natural or non-natural amino acid;

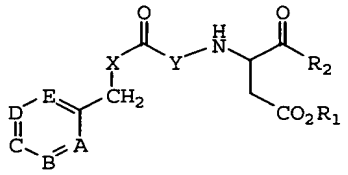
provided that when X is O, then R_3 is not unsubstituted benzyl or *t*-butyl; and when X is CH_2, then R_3 is not hydrogen.

Claim 85 (new). The method of claim 84, wherein said cell death is due to type I diabetes.

Claim 86 (new). The method of claim 84, wherein said cell death is due to lupus erythematosus.

Claim 87 (new). The method of claim 84, wherein said cell death is due to rheumatoid arthritis.

Claim 88 (new). A method of treating or ameliorating cell death in lupus erythematosus, rheumatoid arthritis or type I diabetes, comprising administering to an animal in need of such treatment or ameliorating an effective amount of a compound having the Formula II:



(II)

or pharmaceutically acceptable salts or prodrugs thereof wherein:

R_1 is an optionally substituted alkyl or hydrogen;

R_2 is hydrogen or optionally substituted alkyl;

X is O, S, NR_4 or $(CR_4R_5)_n$, wherein R_4 and R_5 are, at each occurrence, independently selected from the group consisting of hydrogen, alkyl, and cycloalkyl, and n is 0, 1, 2 or 3;

Y is a residue of a natural or non-natural amino acid;

A is CR_6 or nitrogen;

B is CR_7 or nitrogen;

C is CR_8 or nitrogen;

D is CR_9 or nitrogen;

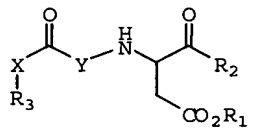
E is CR_{10} or nitrogen; provided that not more than three of A, B, C, D and E are nitrogen; and R_6-R_{10} independently are hydrogen, halo, C_1-C_6 haloalkyl, C_6-C_{10} aryl, C_4-C_7 cycloalkyl, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_6-C_{10} aryl(C_1-C_6)alkyl, C_6-C_{10} aryl(C_2-C_6)alkenyl, C_6-C_{10} aryl(C_2-C_6)alkynyl, C_1-C_6 hydroxyalkyl, nitro, amino, cyano, C_1-C_6 acylamino, hydroxy, C_1-C_6 acyloxy, C_1-C_6 alkoxy, alkylthio, or carboxy; or one of R_6 and R_7, or R_7 and R_8, or R_8 and R_9, or R_9 and R_{10} are taken together with the carbon atoms to which they are attached to form a carbocycle or heterocycle, selected from the group consisting of —OCH_2O—, —OCF_2O—, —$(CH_2)_3$—, —$(CH_2)_4$—, —OCH_2CH_2O—, —$CH_2N(R_{13})CH_2$—, —$CH_2CH_2N(R_{13})CH_2$—, —$CH_2N(R_{13})CH_2CH_2$—, –$N(R_{13})$–CH=CH–, -CH=CH–$N(R_{13})$–, –O–CH=CH–, –CH=CH–O–, –S–CH=CH–, –CH=CH–S–, –N=CH–CH=CH–, –CH=N–CH=CH–, –CH=CH–N=CH–, –CH=CH–CH=N–, –N=CH–CH=N–, and —CH=CH—CH=CH—; wherein R_{13} is hydrogen, alkyl or cycloalkyl; provided that when X is O, A is CR_6, B is CR_7, C is CR_8, D is CR_9 and E is CR_{10}, then at least one of the R_6-R_{10} is not hydrogen.

Claim 89 (new). The method of claim 88, wherein said cell death is due to type I diabetes.

Claim 90 (new). The method of claim 88, wherein said cell death is due to lupus erythematosus.

Claim 91 (new). The method of claim 88, wherein said cell death is due to rheumatoid arthritis.

Claim 92 (new). A method of protecting a mammalian organ or tissue from cell death due to deprivation of normal blood supply, comprising contacting said organ or tissue with an effective amount of a compound having the Formula I:


(I)

or pharmaceutically acceptable salts or prodrugs thereof, wherein:

R_1 is an optionally substituted alkyl or hydrogen;

R_2 is hydrogen or optionally substituted alkyl;

R_3 is an alkyl, saturated carbocyclic, partially saturated carbocyclic, aryl, saturated heterocyclic, partially saturated heterocyclic or heteroaryl group, wherein said group is optionally substituted;

X is O, S, NR_4 or $(CR_4R_5)_n$, where R_4 and R_5 are, at each occurrence, independently selected from the group consisting of hydrogen, alkyl and cycloalkyl, and n is 0, 1, 2 or 3; or

X is NR_4, and R_3 and R_4 are taken together with the nitrogen atom to which they are attached to form a saturated heterocyclic, partially saturated heterocyclic or heteroaryl group, wherein said group is optionally substituted; or

X is CR_4R_5, and R_3 and R_4 are taken together with the carbon atom to which they are attached to form a saturated carbocyclic, partially saturated carbocyclic, aryl, saturated heterocyclic, partially saturated heterocyclic or oxygen-containing heteroaryl group, wherein said group is optionally substituted; and

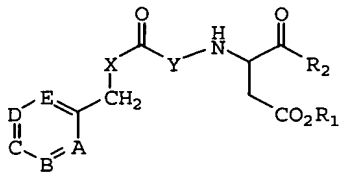
Y is a residue of a natural or non-natural amino acid;

provided that when X is O, then R_3 is not unsubstituted benzyl or *t*-butyl; and when X is CH_2, then R_3 is not hydrogen.

Claim 93 (new). The method of claim 92, wherein said organ or tissue is present in a storage medium prior to transplant into a mammal.

Claim 94 (new). The method of claim 93, wherein said contacting comprises infusion of said compound into the organ or tissue, or bathing of said organ or tissue in a storage medium which comprises said compound.

Claim 95 (new). A method of protecting a mammalian organ or tissue from cell death due to deprivation of normal blood supply, comprising contacting said organ or tissue with an effective amount of a compound having the Formula II:


(II)

or pharmaceutically acceptable salts or prodrugs thereof wherein:

R_1 is an optionally substituted alkyl or hydrogen;

R_2 is hydrogen or optionally substituted alkyl;

X is O, S, NR_4 or $(CR_4R_5)_n$, wherein R_4 and R_5 are, at each occurrence, independently selected from the group consisting of hydrogen, alkyl, and cycloalkyl, and n is 0, 1, 2 or 3;

Y is a residue of a natural or non-natural amino acid;

A is CR_6 or nitrogen;

B is CR_7 or nitrogen;

C is CR_8 or nitrogen;

D is CR_9 or nitrogen;

E is CR_{10} or nitrogen; provided that not more than three of A, B, C, D and E are nitrogen; and R_6-R_{10} independently are hydrogen, halo, C_1-C_6 haloalkyl, C_6-C_{10} aryl, C_4-C_7 cycloalkyl, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_6-C_{10} aryl(C_1-C_6)alkyl, C_6-C_{10} aryl(C_2-C_6)alkenyl, C_6-C_{10} aryl(C_2-C_6)alkynyl, C_1-C_6 hydroxyalkyl, nitro, amino, cyano, C_1-C_6 acylamino, hydroxy, C_1-C_6 acyloxy, C_1-C_6 alkoxy, alkylthio, or carboxy; or

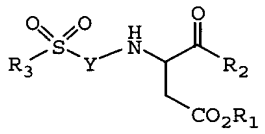
one of R_6 and R_7, or R_7 and R_8, or R_8 and R_9, or R_9 and R_{10} are taken together with the carbon atoms to which they are attached to form a carbocycle or heterocycle, selected from the group consisting of —OCH_2O—, —OCF_2O—, —$(CH_2)_3$—, —$(CH_2)_4$—, —OCH_2CH_2O—, —$CH_2N(R_{13})CH_2$—, —$CH_2CH_2N(R_{13})CH_2$—, —$CH_2N(R_{13})CH_2CH_2$—, –$N(R_{13})$–CH=CH–, -CH=CH–$N(R_{13})$–, –O–CH=CH–, –CH=CH–O–, –S–CH=CH–, –CH=CH–S–,

–N=CH–CH=CH–, –CH=N–CH=CH–, –CH=CH–N=CH–, –CH=CH–CH=N–, –N=CH–CH=N–, and —CH=CH—CH=CH—; wherein R_{13} is hydrogen, alkyl or cycloalkyl; provided that when X is O, A is CR_6, B is CR_7, C is CR_8, D is CR_9 and E is CR_{10}, then at least one of the R_6-R_{10} is not hydrogen.

Claim 96 (new). The method of claim 95, wherein said organ or tissue is present in a storage medium prior to transplant into a mammal.

Claim 97 (new). The method of claim 96, wherein said contacting comprises infusion of said compound into the organ or tissue, or bathing of said organ or tissue in a storage medium which comprises said compound.

Claim 98 (new). A method of protecting a mammalian organ or tissue from cell death due to deprivation of normal blood supply, comprising contacting said organ or tissue with an effective amount of a compound having the Formula III:



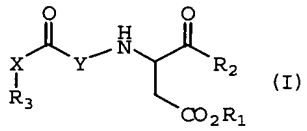
(III)

or pharmaceutically acceptable salts or prodrugs thereof, wherein:
R_1 is an optionally substituted alkyl or hydrogen;
R_2 is hydrogen or optionally substituted alkyl;
R_3 is an alkyl, saturated carbocyclic, partially saturated carbocyclic, aryl, saturated heterocyclic, partially saturated heterocyclic or heteroaryl group, wherein said group is optionally substituted; and
Y is a residue of a natural or non-natural amino acid.

Claim 99 (new). The method of claim 98, wherein said organ or tissue is present in a storage medium prior to transplant into a mammal.

Claim 100 (new). The method of claim 99, wherein said contacting comprises infusion of said compound into the organ or tissue, or bathing of said organ or tissue in a storage medium which comprises said compound.

Claim 101 (new). A method of reducing or preventing cell death in a donor organ or tissue after it has been transplanted into a host due to the effects of reperfusion injury or due to the effects of host immune cells, comprising administering to said host in need thereof an effective amount of a compound having the Formula I:


(I)

or pharmaceutically acceptable salts or prodrugs thereof, wherein:

R_1 is an optionally substituted alkyl or hydrogen;

R_2 is hydrogen or optionally substituted alkyl;

R_3 is an alkyl, saturated carbocyclic, partially saturated carbocyclic, aryl, saturated heterocyclic, partially saturated heterocyclic or heteroaryl group, wherein said group is optionally substituted;

X is O, S, NR_4 or $(CR_4R_5)_n$, where R_4 and R_5 are, at each occurrence, independently selected from the group consisting of hydrogen, alkyl and cycloalkyl, and n is 0, 1, 2 or 3; or

X is NR_4, and R_3 and R_4 are taken together with the nitrogen atom to which they are attached to form a saturated heterocyclic, partially saturated heterocyclic or heteroaryl group, wherein said group is optionally substituted; or

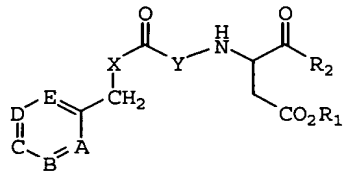
X is CR_4R_5, and R_3 and R_4 are taken together with the carbon atom to which they are attached to form a saturated carbocyclic, partially saturated carbocyclic, aryl, saturated heterocyclic, partially saturated heterocyclic or oxygen-containing heteroaryl group, wherein said group is optionally substituted; and

Y is a residue of a natural or non-natural amino acid;

provided that when X is O, then R_3 is not unsubstituted benzyl or *t*-butyl; and when X is CH_2, then R_3 is not hydrogen.

Claim 102 (new). A method of reducing or preventing cell death in a donor organ or tissue after it has been transplanted into a host due to the effects of reperfusion

injury or due to the effects of host immune cells, comprising administering to said host in need thereof an effective amount of a compound having the Formula II:


(II)

or pharmaceutically acceptable salts or prodrugs thereof wherein:

R_1 is an optionally substituted alkyl or hydrogen;

R_2 is hydrogen or optionally substituted alkyl;

X is O, S, NR_4 or $(CR_4R_5)_n$, wherein R_4 and R_5 are, at each occurrence, independently selected from the group consisting of hydrogen, alkyl, and cycloalkyl, and n is 0, 1, 2 or 3;

Y is a residue of a natural or non-natural amino acid;

A is CR_6 or nitrogen;

B is CR_7 or nitrogen;

C is CR_8 or nitrogen;

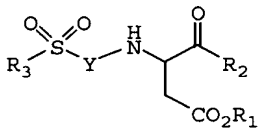
D is CR_9 or nitrogen;

E is CR_{10} or nitrogen; provided that not more than three of A, B, C, D and E are nitrogen; and R_6-R_{10} independently are hydrogen, halo, C_1-C_6 haloalkyl, C_6-C_{10} aryl, C_4-C_7 cycloalkyl, C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_6-C_{10} aryl(C_1-C_6)alkyl, C_6-C_{10} aryl(C_2-C_6)alkenyl, C_6-C_{10} aryl(C_2-C_6)alkynyl, C_1-C_6 hydroxyalkyl, nitro, amino, cyano, C_1-C_6 acylamino, hydroxy, C_1-C_6 acyloxy, C_1-C_6 alkoxy, alkylthio, or carboxy; or

one of R_6 and R_7, or R_7 and R_8, or R_8 and R_9, or R_9 and R_{10} are taken together with the carbon atoms to which they are attached to form a carbocycle or heterocycle, selected from the group consisting of —OCH_2O—, —OCF_2O—, —$(CH_2)_3$—, —$(CH_2)_4$—, —OCH_2CH_2O—, —$CH_2N(R_{13})CH_2$—, —$CH_2CH_2N(R_{13})CH_2$—, —$CH_2N(R_{13})CH_2CH_2$—, –$N(R_{13})$–CH=CH–, -CH=CH–$N(R_{13})$–, –O–CH=CH–, –CH=CH–O–, –S–CH=CH–, –CH=CH–S–, –N=CH–CH=CH–, –CH=N–CH=CH–, –CH=CH–N=CH–, –CH=CH–CH=N–, –N=CH–CH=N–, and —CH=CH—CH=CH—; wherein R_{13} is hydrogen, alkyl or cycloalkyl;

provided that when X is O, A is CR_6, B is CR_7, C is CR_8, D is CR_9 and E is CR_{10}, then at least one of the R_6-R_{10} is not hydrogen.

Claim 103 (new). A method of reducing or preventing cell death in a donor organ or tissue after it has been transplanted into a host due to the effects of reperfusion injury or due to the effects of host immune cells, comprising administering to said host in need thereof an effective amount of a compound having the Formula III:



(III)

or pharmaceutically acceptable salts or prodrugs thereof, wherein:

R_1 is an optionally substituted alkyl or hydrogen;

R_2 is hydrogen or optionally substituted alkyl;

R_3 is an alkyl, saturated carbocyclic, partially saturated carbocyclic, aryl, saturated heterocyclic, partially saturated heterocyclic or heteroaryl group, wherein said group is optionally substituted; and

Y is a residue of a natural or non-natural amino acid.